REMARKS

Claim 1 is amended herewith so as to emphasize the temperature at the outlet of the heat exchanger is maintained at the equilibrium temperature minus 0.5 to 0.9 times the meta-stable region ΔT_{max}.

The applied reference, which is U.S. Patent 4,483,681 to ERNSTING, suggests nothing like this.

Accordingly, reconsideration is respectfully requested, for the rejection of the claims as anticipated by or unpatentable over ERNSTING.

It has been found, according to the present invention, and quite surprisingly, that by use of a simple recirculation duct, in which no filters or separators are included between the outlet and inlet of the heat exchanger, as recited in claim 2, sufficiently large crystals with a narrow size distribution range can be obtained. In order to create the sub-cooling requirement in the heat exchanger of the present invention, the flow rate through the recirculation duct is between 0.2 and 3 meters per second (claim 6), and the dimensioning of the recirculation duct is given as in claim 5, in order to provide sufficient residence time for crystals to grow.

But starting from the teaching of ERNSTING, a person of ordinary skill in the art would in no way arrive at a crystallization method of the present invention. In the first place, ERNSTING discloses a process of providing an edible

plastified dispersion, such as margarine, in which crystallization of the fat is a step which is carried out prior to phase inversion. Unlike the present invention, which produces crystals of a size in the range 100-1000 µm, e.g. about 400 µm, ERNSTING is not interested in obtaining crystals. As can be seen from ERNSTING's drawing, one step is to provide kinetic energy in C-units 15 and 16 in order to arrive at phase inversion. After C-unit 15, the crystals have disappeared. No residence time in the ERNSTING recirculation duct is provided for crystal growth, as there are no crystals that are to be recirculated.

But in the present invention, such a step of deliberate input of mechanical energy is avoided, in order to avoid damaging the crystals that are being formed and to have a high throughput at low energy consumption. See claim 2, in which the absence of filters or separators in the recirculation path is specified.

Moreover, ERNSTING provides a heated return path of the emulsion through 21 and 22, as described in column 12, lines 6-11. This is completely contrary to the present invention, wherein the return duct is used for crystal growth, not for melting. As can be seen from Figure 2 of the present application, the heating of the crystal slurry in the return duct is limited, from a lower temperature which is the equilibrium temperature minus 0.5 - 0.9 ΔT_{max}, up to T_{eq}. This heating by at most 0.9 ΔT_{max} in the return duct is entirely contrary to

ERNSTING, in which the return path is heated via heat exchanger 22.

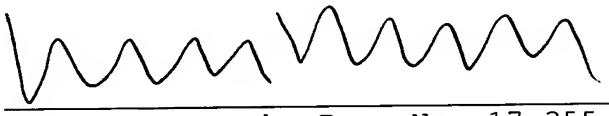
Accordingly, starting from ERNSTING, a person of ordinary skill in the art would have no obvious way to arrive at the present invention.

As the claims now in the case clearly bring out these distinction with ample particularity, it is believed that they are all patentable, and reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



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